What is claimed is:

- 1. A process for preparing N-methyldialkylamines from secondary dialkylamines and formaldehyde at a temperature of from 100 to 200°C, which comprises using from 1.5 to 3 mol of formaldehyde per mole of secondary dialkylamine, degassing the resulting reaction product, removing the aqueous phase and distilling the organic phase.
- 2. The process as claimed in claim 1, wherein from 1.5 to 2.5 mol of formaldehyde are used per mole of secondary dialkylamine.
 - 3. The process as claimed in claim 1 or 2, wherein operation is effected at a temperature of from 120 to 160°C.
- The process as claimed in one or more of claims 1 to 3, wherein the secondary dialkylamines used are mixed or symmetrical cycloaliphatic or aliphatic dialkylamines having straight-chain or branched, saturated or unsaturated alkyl groups each having from 2 to 20 carbon atoms or having arylalkyl groups each having from 7 to 15 carbon atoms.

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- 5. The process as claimed in claim 4, wherein the secondary dialkylamines used are mixed or symmetrical cycloaliphatic or aliphatic dialkylamines having straight-chain or branched, saturated or unsaturated alkyl groups each having from 2 to 15 carbon atoms, preferably from 2 to 9 carbon atoms.
- 6. The process as claimed in one or more of claims 1 to 3 for preparing N-methyldi-n-butylamine or N-methyldi-n-propylamine.